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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/371,776 08/10/99 CAMPBELL

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EXAMINER

PM82/0504

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ART UNIT	PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/371,776

Applicant(s)

Campbell et al.

Examiner

David Dunn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 23, 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 23-31 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 7, 9, 10, 12, 15, 17-21, 23, and 26-28 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 5, 8, 11, 13, 14, 16, 24, 25, 29, and 30 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

This Office Action is responsive to the amendment filed 3/23/01 in which claim 22 was canceled and new claims 23-31 were added.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamilton (6,145,876).

Hamilton shows an apparatus for helping to protect an occupant of a vehicle that has a side structure, said apparatus comprising: an inflatable vehicle occupant protection device (see column 1, lines 15-30 and Figures 7-8) that is inflatable into a position between the side structure of the vehicle and a vehicle occupant; and an inflator (Figure 9-10) for inflating said inflatable vehicle occupant protection device and for maintaining said inflatable vehicle occupant protection device in an inflated condition for at least seven seconds (column 18, lines 50-56), said inflator containing a stored inflation fluid (174) under pressure, said inflation fluid consisting essentially of

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helium (see column 2, line 50). Hamilton shows a fill tube (outer tube 96) located in the inflatable device. Hamilton also shows a container (174; Figure 10) for storing inflation fluid ; a rupturable closure member (234); and an initiator (142), which when actuated, causes the closure member to rupture (with 230) to allow inflation fluid to flow through the passage.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6, 7, 9, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (3,648,898) in view of Popek (5,242,194).

Day discloses an apparatus for providing inflation fluid to inflate an inflatable vehicle occupant protection device, said apparatus comprising: a container (10) storing inflation fluid under pressure, said container having an outlet passage (through 12); a rupturable closure member (16) fixed to said container (fixed to 14 by 18 and 20) and blocking flow of inflation fluid through said passage; a support (18) for said rupturable closure member defining a chamber adjacent said rupturable closure member; said rupturable closure member having a first portion (center portion of 16) deformed into the opening by the pressure of the inflation fluid (inherent) and a second ring-shaped portion (outer portion of 16) encircling said first portion; and an initiator which, when

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activated, ruptures the closure member (32). With respect to claim 6, the initiator (32) extends into the hollow member (when activated). With respect to claim 7, it is inherent that the closure member is work hardened due to plastic deformation (see domed shape); also with respect to this claim, Day shows the same final product, and the method step is not germane to the patentability of the apparatus claim. The support (18) includes a circular rim defining an opening into the chamber, the rim having a surface engaging the disk. The circular rim (of 18) defines a periphery of the first portion where the closure member engages the rim and the first portion extends into the chamber through the opening.

Day fails to show the closure member rupturing by shearing the first portion from the second portion.

Popek teaches an inflator with a rupturable closer member (52) with an initiator (140) which ruptures the closure member by shearing the first portion (196; see Figure 4) from the second portion (88). Note that Popek also shows the rupture disk deformed outward of the inflation chamber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Day with the teachings of Popek in order to provide a simplified striker to open the burst disk.

5. Claims 10, 12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day in view of Popek as applied to claim 1 above, and further in view of Yamaji et al.

(6,056,316).

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The combination of Day and Popek is discussed above and fails to show the airbag maintained inflated for at least seven seconds.

Yamaji et al. teaches a side air bag that has a low permeability and is able to remain inflated for about 5 seconds (see column 4, lines 59-64).

It would been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Day and Popek with the teachings of Yamaji et al. in order to use the inflator on a side air bag to further protect the occupant. As Yamaji teaches keeping the airbag inflated for several seconds, it would have been obvious to provide an airbag that could stay inflated for seven seconds by changing the size of the airbag, amount of inflation gas, or decreasing the permeability of the airbag.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton in view of Day.

Hamilton is discussed above and fails to show a support for supporting the closure member.

As discussed above, Day teaches a support member (18) for supporting a rupture member.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hamilton with the teachings of Day in order to provide additional support to better hold the rupture member.

7. Claims 10, 12, 15, 23, and 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Day in view of Popek as applied to claim 1 above, and further in view of Lewis (6,142,508).

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The combination of Day and Popek is discussed above and fails to show the inflation fluid consisting essentially of helium.

Lewis teaches a side air bag in which the inflation fluid consists essentially of helium (see column 7, lines 18-21).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Day and Popek with the teachings of Yamaji et al. in order to use the inflator on a side air bag to further protect the occupant and in order to provide the use of an inert gas in order to limit any chemical reactions that may occur in a crash.

Allowable Subject Matter

8. Claims 2, 4, 5, 8, 11, 13, 14, 16, 24, 25, 29, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claim 31 is allowed.

Response to Arguments

10. Applicant's arguments filed 3/23/01 have been fully considered and are addressed below.

Applicant's arguments on pages 8-12 have been considered but are now moot as the 112 rejections have been withdrawn.

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On pages 12-14, applicant argues the rejection based on the Hamilton patent. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "stored helium inflator as the sole inflation means for inflating the inflatable vehicle occupant protection device") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Guens*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Hamilton shows all of the features as recited in claim 18 including an inflator (178) of helium (column 2, line 50). The fact that Hamilton discloses additional structure that is not claimed is not germane to the patentability of the claim.

Applicant's arguments with respect to claims 1 and 10 on pages 14-15 have been considered but are moot in view of the new ground(s) of rejection based on the amended claims. Popek is used to show an initiator which shears off the entire first portion of the closure member. With respect to applicant's arguments that Day does not teach a first portion deformed into a chamber under the pressure of inflation fluid, it is submitted that both Day and Popek both show the rupture disk inherently deformed under the pressure of inflation fluid. While the references may not specifically discuss the reason why the disks are deformed outward, it is submitted that the disks are shown deformed in this manner due to the pressure of the inflation fluid. It appears that this is why Day and Popek both show the rupture disk buckled outward.

With respect to the arguments on page 16 regarding claims 7 and 15, as noted in the rejection above, the examiner maintains that this subject matter is inherent in the references;

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further, these claims recite an intermediate method step which is not germane to the patentability of the apparatus claim. The references cited in the rejection show the same apparatus as claimed.

With respect to applicant's arguments on pages 16-19 regarding claims 8, 16, 24, 29, 25, 30, 2, 11, and 31 (in order as argued), these arguments are now moot, as these claims have been noted as containing allowable subject matter.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Al-Amin et al. shows an inflator with a similar rupture membrane.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Dunn whose telephone number is (703) 305-0049. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann, can be reached on (703) 306-4115. The fax phone number for this Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.


DAVID R. DUNN
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